INSTITUTE OF MANAGEMENT

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RESEARCH PROPOSAL ON

EFFECTIVENESS OF E-LEARNING IN HIGHER EDUCATION: A STUDY OF PROFESSIONAL INSTITUTES AND TRADITIONAL INSTITUTES.

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INTRODUCTION

E-learning is defined as web based learning that involves the integration of the Internet with learning. It involves the use of a computer or electronic device such as mobile phone, in some way to provide training, education or learning material. It is a powerful tool for achieving strategic objectives of the university - teaching, research and serving the society. Al_Mosa (2002) defines E-learning as a learning method that uses modern communication techniques like computer, computer networks, searching engines, E-libraries and multimedia. E-learning does help to widen the scope of education and can prove to be a vital asset, if it is 'effective'. Rashid (2007) states that E-learning is a generic term for all mechanisms employed to aid learning and disseminate information through an electronic medium. Neill et al., (2004) propose that information technology will benefit students in the longer run; it will make students take responsibility for their own learning.

Welsh et al., (2003) said that E-learning or electronic learning is known as instructional content or learning techniques eased by electronic technology and it aims at increasing the knowledge, skills and productive capabilities of the learners in a global situation. Stockley (2003) defined E –Learning as the delivery of a learning, training or education program by electronic means. It involves the use of a computer or electronic device such as mobile phone, in some way to provide training, education or learning material. E-Learning is just-in-time education integrated with high velocity value chains. It is the delivery of individualized, comprehensive, dynamic learning content in real time, aiding the development of communities of knowledge, linking learners and practitioners with experts.

Few years back, a university without classrooms, or a library without books could not be imagined. Nor could a university existing 10,000 miles away from its students could be thought of. Yet, all of this is true today. The University of Phoenix, for example, one of the most dynamic amongst the distance learning universities, has an enrolment of over 200,000 students across the world. A for profit corporation, it is listed on the New York Stock Exchange. In the US, there are approximately 3000 institutions offering online education and training. Currently there are more than 1000 corporate universities competing for educational markets in the US and abroad Douglass (2005a).

REVIEW OF LITERATURE

The traditional educational delivery system in universities and colleges has been a classroom with a professor giving lectures to students and the students listening and taking notes. Interaction between the professor and students has been perceived to be a crucial learning ingredient in this delivery platform. Innovations in educational delivery mechanisms such as interactive and reflective schools of thought have, however, challenged the traditional approaches to education Janicki and Steinberg (2003). Progress in information technology has enabled new educational delivery methods such as distance learning and e-learning. As an outcome of this, many universities and colleges have entered this new e-learning world in a major way. For this reason the need for pedagogical and technical knowledge to teach using the Internet has emerged, and this knowledge is slowly becoming a core competence for many

teachers. Given the proliferation of electronic mediated teaching, the essential question here is that how and to what extent e-learning and the information technology is changing the dynamics of teaching and learning.

E-learning has entered the education as well as the corporate world in a major way and it also complements the traditional delivery methods. It has facilitated the traditionally difficult educational paradigms such as adult learning or distance learning. E-learning can be viewed as an alternative to the face-to-face teaching method or as a complement to it. E-learning usually allows the student a greater choice as well as responsibility for their own learning Vrasidas and McIsaac (2000). E-learning can change the methods of learning and has the promise to overcome the barriers of time, distance, and economics Collis (1998).

E-learning is a priceless gift to the learning and education sector. This has eliminated the distance barrier and made learning a pleasant and joyful experience. With the advent of E-learning, knowledge and information is just a click away. Studies have shown that E-Learning could increase student engagement, motivation and attendance, which are the key requisites for learning. Effective E-learning can also improve performance on core subjects and foster the development of 21st century skills in emerging countries. The study by Boumedyen et al., (2011) scores the fact that classes that integrate use of software and use of computers while teaching have significant effect on the marks even though there is no online examination. Similarly, the resultant marks of the students, if multimedia is used in the classroom are comparatively better even when no software is being used and the students communicate with the instructor via mail and appear for on line examination. The students who were neither taught with the help of books in the classroom nor with the help of physical models instead were taught with the help of any kind of software and online examination and communicated with the instructor on mail gave the best results. Overall, the findings show that teaching without the use of books gives better results and thus enhances the performance of the students. Web-based network has provided simple and easy access to educational resources for learners everywhere and every time, even in remote and disadvantaged areas of the learning environment by creating home schools, and thereby providing educational justice (Buckley, 2008).

Using this multimedia environment with the possibility of transferring data in the form of sound, images, text, painting and using the principles of Web design has created interest and motivation in learners. Flexibility in designing content, being interactive, the use of group participation, individual education, independent learning are the other benefits of using E-learning. Teachers do not remain as the only source of knowledge transfer but also as educational facilitators. Accordingly, many educational systems in recent decades have tried entering and using this new technology to improve learning within less time (Adelman, 2005).

There is a significant relationship between the use of dictation web based E-learning programs and students academic achievement. The use of electronic learning environment programs improves student's cognitive and psychomotor skills as well as their laboratory classroom instructional approaches (Kiboss, 2000; Wekesa, 2003; Kiboss & Ogunniyi, 2005). The use of ELEP improved both the pupils' understanding of measurement concepts and skills, and other problem solving and manipulative skills e.g. calculation and computer operational skills. So Zarabian et al., (2010) concluded that to enhance students dictation learning quality, practitioners

and planners of education must conduct their efforts to design web based programs and integration of curriculum with computers and the Internet in order to develop the native language.

The role of E-learning has been closely linked with staff training in organizations, to improve the knowledge and skills of employees which has direct impact on the efficiency of the organization. Within staff training, easy accessibility is a major issue (Alexander et al, 2001). E-learning offers a solution to this problem since in many organizations, access to the IT infrastructure supports the learning. E-learning also supports higher level of training for executives and managers and distance learning. All employees do not need to be physically present for the class. Instead they can connect to the intra-net for learning. This makes learning flexible, because the staff can learn anywhere within the organization without geo-graphical and time restrictions. There is no travelling involved, which saves the travel costs that account for two-thirds of most corporate training budgets (Electric Perspective, 2001). Employees have the freedom to learn at their own pace. Another benefit of E-learning is scalability. E-learning supports large-scale training that can involve thousands of employees. This is more efficient than face-to-face training, which requires more workshops, more time, more travelling and more instructors' time. Hence, E-learning saves the organizations time and resources (Reid, 2002; Chang, 2003).

Slate et al. (2002) proposed that cultural and gender differences play an important role in the adoption of E-learning. He found out that there is a statistically significant difference between males and females in their attitudes toward the use of the Internet and technology, with males generally more accepting in the use of technology than females. Attitudes to the use of technology affect the choice of educational course. Females exhibit more anxiety in the use of technology and do not incorporate technology courses in their educational programs as much as males. Tamrakar and Mehta (2011) contended that E-learning tools/models help teachers in effective teaching as compared to traditional/conventional teaching methods. It can be proved by taking some parameters like availability of material, availability of teacher and evaluation of data analysis. Jung (2011) in a study on 299 learners in higher education institutes in South Korea found that there are seven dimensions in evaluating the E-Learning quality. These dimensions are Interaction, Staff support, Institutional quality assurance mechanism, Institutional credibility, Learner support, Information and publicity and Learning tasks.
Phillips, R. (2004) has proposed a set of four design dimensions which could be considered when designing and assessing the suitability of E-learning applications. These dimensions are student student interaction, student resource interaction, student resource interaction and student computer interaction.

Schank (2002) used the acronym FREEDOM, to suggest seven means by which to assess an E-learning programme. The first of these, Failure, helps the student learn from his/her mistakes; an important element in any learning programme. Reasoning, the second measure, is also seen as a significant element particularly in regards to encouraging practice in deliberating decisions which, along with his fifth measure, Doing, should involve the provision of training for students to apply their knowledge in real-life situations. Emotionality and Exploration meanwhile help provide a more engaging environment for learners by allowing them to form an emotional link to

material while also having the option to inquire or further discuss a topic. All materials of course should be presented in a user-friendly format and supported with the opportunity for Observation, measure number six, which includes the provision of diagrams charts and other visual aids. Motivation, the final measure which provides the student with a feeling of being able to personally relate to the material and its value. Schank's methods, although being rather clear cut, are only a few suggestions of many on the topic of evaluation. A study by Olds (2004) suggests that the best approach to deciding what evaluation means is to begin by exploring a range of methods and then deciding at a later point which of these methods best meets programme goals. Whatever the approach, the bottom line is that there is unlikely to be one absolute method and, with this in mind, training managers and educators should perhaps focus on what's best suited and feasible rather than what's most credibly acclaimed.

Norton and Wilburg (1998) suggested that instructors should ask the following questions when selecting a multimedia environment: What is the theoretical approach to learning that guides the design of the learning environment? Does the learning environment support opportunities for student groups to discuss and work with the material? Are a variety of perspectives presented for the concepts taught? Are students encouraged to critically evaluate information regardless of whether that information is presented as images, sounds, or text? Within the structure of the learning environment, are opportunities provided for student to build their own links between different types of information.

It has been reported that traditional lectures are not always rated as the best way to learn (Biggs 1999). Today's students have grown up in a technological age of television, computers and videogames. Some researchers argue that neither students nor teachers regard traditional lectures as effective and students now expect technology to be used effectively as part of their learning experience (Willcoxson 1998, Frey and Birnbaum 2002). The challenge for lecturers has held the attention of students from this high-tech generation. Many authors have suggested designing the learning and teaching environment to promote greater student participation and engagement, thereby increasing deep learning in the students (Biggs 1999, Chao-Min et al. 2005, Toral et al. 2006). Students find E-learning appealing and engaging and may therefore be more involved and motivated as a consequence. Chiu et al., (2005) reported that users' intention to continue using an E-learning service is considered as a major determinant of E-learning success. While initial use (acceptance) of the E-learning service is the important first step toward realising E-learning success, an eventual E-learning success further depends on its continued use or 'continuance' (in contrast to initial use or 'acceptance') after initial use. Clearly, understanding the factors influencing the user's intention to continue using the E-learning service is a critical issue for researchers and practitioners.

PROBLEMS REGARDING EFFECTIVENESS OF E-LEARNING

E-learning has yet to garner complete acceptance from the educational and business community. It is a concept that is often shrouded in skepticism by members from both the academic and corporate fields who are often incredulous of its effectiveness and practicability. A large degree

of this suspicion can be attributed to the often highly substantial costs associated with online programmes, particularly at the development stage. Students, governments, educators and corporations today expect E-learning to be an affordable and comprehensive learning method; an ambition that appears to have been largely unmet. Course providers, particularly from the education sector, have often left many asking "why is there no learning in E-learning" (Bonk, 2002); but more precisely, what is it that prevents E-learning from being at par with face-to-face learning? A recent study at Indiana University identified overwhelming tasks, confusion, poor justification and excessive data as some of the problems that compound to the lack of effectiveness (Bonk, 2002).

Schank (2002) evaluated that there is tendency amongst course designers to try and make E-learning 'look and feel like face-to-face learning'. Poor pedagogy, inferior online tools, unmotivated students and instructors, poor research and measurement and the mismatching of vendor/administrator visions are other matters of concern. Effective learning for students must constitute 'doing a task they care about, failing, and redoing it until they get it right' Mere audio recordings, slide-shows and other visual stimuli make for a sub-standard replacement for fundamental learning tools. This of course relates to the bigger issue regarding a failure amongst course developers in ensuring adequate integration of learning content with real-life situations and 'principles and ideas learned in one domain are almost never transferred to another arena'. Students are often left incapable of applying the skills learned during a course directly at the workplace.

Ritzel (2002) attributes part of the problem to the failure on the part of the education system to adapt from providing for a largely manual-labour orientated economy to what has today become a more intellectual-based society; a change which has been further complicated, some may say, by an equally significant paradigm shift in technology. According to him this shift is the 'E-learning fad' and expounded that many online courses were largely ineffective from the very onset, because course designers themselves were mostly information technology and Internet specialists and for them, training programs were just like any other content. They merely took whatever they found (or were given) and enabled it on the Net without even considering the use of creative and innovative opportunities for new interactive learning experiences. E-learning should capitalise on innovative delivery means and graphic and audio capabilities, offer a completely new method of learning unlike that of any classroom. This has to be focus of E-learning that can lead both businesses and educators to acquire a new perspective on E-learning.

In the higher education (HE) sector and beyond, e-learning has often been associated with radical change and attributed with introducing significant and far reaching disruptions into almost every facet of university life (Spender 2002). This position is, however, contestable with contradictory evidence suggesting that, at best, the impact of most change associated with E-learning so far has been incremental (Salmon 2005) and, at worst, e-learning has been a failure (Maslen 2004; Zemsky and Massy 2004). There are other issues to consider in the use of learning technologies. The use of technology in education may be inappropriate for conventional pedagogical approaches of information transfer and high stakes assessment Lewin et al. (2003), and the social context of education is more important than the technology or the curriculum Henning and Westhuizen (2004). So even if ICT is used to reduce time and place barriers, students accessing resources from home, and limiting their presence on campus, will miss out on the benefits

associated with face-to-face learning, and the learning in meaningful contexts espoused by Bruner (1960).

Kurse (2004a) found that students are yet to be convinced of the benefits or even the adequacy of online instruction which can often be a setback for business E-learning programmes, particularly in organisations where 'student demographics and psychographics may predispose them against using computers at all, let alone for e-learning'. Many students in a corporate setting who are forced to complete training programs are motivated only to 'pass the test'. Designers must strive to create a deeper motivation in learners for them to learn new skills and transfer those skills back into the work environment. This relates back to the underlying problem of poor motivation which, as identified by Bonk (2002) today makes for one of the major stumbling blocks of online education. Kurse (2004b) suggested that there is a need for a greater emphasis on providing engaging, more student-orientated material for E-learning to be successful. This is not to suggest of course that all E-learning developments have been unsuccessful. Several institutions do manage to provide highly effective programmes, the most notable perhaps being the University of Phoenix which, as far as revenue is concerned, makes for one of the great success stories of the industry. On the corporate side meanwhile, a number of organisations particularly in the high-tech sector have also been successful. Despite these successes however, E-learning is, no doubt, still in its infancy with many significant developments yet to come. Further analysis and study will help meet this objective and will hopefully assist course designers in developing a programme that may one day parallel or even surpass traditional classroom training.

RATIONALE OF THE STUDY

E-learning has been incorporated in the curricula of professional institutes in India and its usage in the traditional institutes is coming up. It has been found that the effectiveness of learning increases as the students' engagement, motivation and attendance, the key requisites for learning is elevated. Effective E-Learning can also improve performance on core subjects and foster the development of skills. At the same time highly substantial costs associated with online programmes, particularly at the development stage is a big challenge as E-learning has to be an affordable and comprehensive learning method. Therefore many educational institutes especially the traditional institutes find it difficult to incorporate it into regular curriculum. The present research would be undertaken to explore the challenges and opportunities of E-learning as perceived by the students and faculty of traditional and professional institutes to have understanding of finer nuance of implementation in higher education.

OBJECTIVES

1. To identify the dimensions those affect the E-learning implementation.
2. To identify the perceptual gap between the faculty and students on the dimensions of E-learning.
3. To identify the perceptual gap between the faculty of professional institutes and faculty of traditional institutes.

4. To identify the perceptual gap between the students of professional institutes and students of traditional institutes.
5. To identify the perceptual gap between males and females on E-learning.
6. To identify the perceptual gap due to prior experience with the technology.

METHOD

1. THE STUDY

It will be an exploratory study. It will identify dimensions of E-learning, perceived important by faculty and students of professional institutes and traditional institutes. An attempt will be made to understand which dimensions are perceived as challenges and which are perceived as opportunities by faculty and students of professional and traditional institutes.

2. PROBLEM

Do E-learning tools help students in effective learning as compared to traditional/conventional learning methods?

3. HYPOTHESES

- H01: There is no significant difference in learning through traditional or E-learning methods.
- HA1: There is a significant difference in learning through traditional or E-learning methods.

- H02: There is no significant difference in the perception of faculty and students with respect to learning through E-learning tools.
- HA2: There is a significant difference in the perception of faculty and students with respect to learning through E-learning tools.

- H03: There is no significant difference in the perception of faculty of professional institutes and faculty of traditional institutes with respect to learning through E-learning tools.

- HA3: There is a significant difference in the perception of faculty of professional institutes and faculty of traditional institutes with respect to learning through E-learning tools.

- H04: There is no significant difference in the perception of students of professional institutes and students of traditional institutes with respect to learning through E-learning tools.

- HA4: There is a significant difference in the perception of students of professional institutes and students of traditional institutes with respect to learning through E-learning tools.

- HO5: There is no significant difference in the perception of males and females with respect to learning through E-learning tools.

- HA5: There is a significant difference in the perception of males and females with respect to learning through E-learning tools.

- HO6: There is no significant difference in the perception of students having prior experience with technology and students without any prior experience with technology.

- HA6: There is a significant difference in the perception of students having prior experience with technology and students without any prior experience with technology

- HO7: There is no significant difference in the perception of faculty having prior experience with technology and faculty without any prior experience with technology

- HA7: There is a significant difference in the perception of faculty having prior experience with technology and faculty without any prior experience with technology

4. DESIGN

The study will be based on a multistage design to understand the perceptions of the students and faculty of traditional and professional institutes on the dimensions of E-learning. After consulting the relevant literature, the definition of E-learning will be framed along with identification of 150 items. A panel of 10 judges from various fields of education, information technology and other services will be prepared. The definition will be written on a card and shown to the panel of judges with the necessary instructions for the selection of items presented to them with the card. The judges will be contacted individually. The frequency of choices of the judges will be calculated. The items that will be chosen 75 percent or more times will be spotted. In this process some items will get dropped and the remaining will become part of the final questionnaire. These items will be presented on a five point likert scale and administered on a sample drawn from the 100 students and 100 faculty (total 200 from each sector) in traditional and professional institutes (total sample 400). Item total correlation of items will be calculated and the item/s showing an insignificant correlation with the total score will be dropped. This process will continue iteratively until all the items show significant correlation with the total score.

5. THE SAMPLE

Stratified sampling technique will be used in the study. The sample size will be 400. A sample of 200 will be from traditional institutes, which will comprise of 100 faculty members and 100 students. A sample of 200 will be taken from professional institutes which will comprise of 100 faculty members and 100 students. The sample will be collected from institutes located in Delhi NCR region.

6. THE TOOLS

For data collection survey method will be used. Data will be collected through a structured questionnaire. Appropriate statistical tools will be used for data analysis.

7. POSSIBLE OUTCOMES

The study will attempt to find out dimensions of E-learning. It will identify the perceptual gap between the faculty and students on the dimensions of E-learning. It will find out the perceptual gap if any between the faculty of professional institutes and faculty of traditional institutes. The study will also discover if any perceptual gap exists between the students of traditional institute and students of professional institute on the dimensions of E-learning. Finally it will also identify whether there is a perceptual gap between males and females on E-learning. The results then would give the implementers of E-learning and the management of institutes a solid basis of evidence about the faculty and student perspective of the issues involved in the E-learning systems and what all issues should be kept in mind while incorporating E-learning in the curricula of the institutes.

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LAYOUT OF CHAPTERS

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